Matter No.: 10223-007001 Page 1 of 13 Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING
INFLAMMATORY CONDITIONS

Figure 1 - page 1

gccgctaccagccatgggtctttggggaatactttgtcttttaattttcctggacaaaacttggggaca ggaacaaacctacgtcatttcagcacccaaaatcctccgggtcggctcgtctgaaaatgtggtaattca agtccatggctacactgaagcatttgatgcaactctttctctaaaaagctatcctgacaaaaagtcac cttctcttcaggctatgttaatttgtccccggaaaacaaattccaaaacgcggcactgttgacactaca gcccaatcaagttcctagagaagaaagcccagtctctcacgtgtatctggaagttgtgtcaaaacactt ttcaaaatcaaagaaaataccaattacctataacaatggaattctcttcatccatacagacaaacctgt ggagactgtcttaactttcatagaccccgaaggatcagaagttgacattgtagaagaaaatgattacac cggaattatctcttttcctgacttcaagattccatctaatcccaagtatggtgtttggacaattaaagc taactataagaaggattttacaacaactggaactgcatactttgaaattaaagaatatgtcttgccacg attctctgtttcaatagaactagaaagaaccttcattggctataaaaactttaagaactttgaaatcac tgtgaaagcaagatatttttataataaagtggtacctgatgctgaagtgtatgcctttttttggattgag agttgctcagatctcttttgattctgaaacagcagttaaagagctgtcctacaacagtctagaagactt aaacaacaagtacctttatattgcagtaacagtcacagaatcttcaggtggattttcagaagaggcaga aatccctggagtcaaatatgtcctctctccctacacactgaatttggtcgctactcctcttttcgtgaa gcccgggattccattttccatcaaggcacaggttaaagattcactcgagcaggcggtaggagggtccc agtaactctgatggcacaaacagtcgatgtgaatcaagagacatctgacttggaaacaaagaggagcat cactcatgacactgatggagtagctgtgtttgtgctgaacctcccatcaaatgtgacggtgctaaagtt tgagatcagaactgatgacccagaacttcccgaagaaatcaagccagcaaagagtacgaagcagttgc gtactcgtctctcagccaaagttacatttacatcgcttggactgaaaactacaagcccatgcttgtggg agaatacctgaatattatggttacccccaagagcccatatatcgacaaaataactcactataattactt gattttatccaaaggcaaaattgtacagtacggcacaagagagaaacttttcctcctcaacttatcaaaa tataaatattccagtgacacagaacatggttccttcagcacgactcctggtctattacatagtcacagg $\verb|ggagca| a a cag caga at tagtggctga cg cagtctggata a a tattgaggaga ag tgtggca accagct$ ccaggtccatctgtctccagatgaatatgtgtattctccaggccaaactgtgtcccttgacatggtgac tgaagcagactcatgggtagcactatcagcagtggacagagctgtgtataaagtccagggaaacgccaa aagggccatgcaaagagtctttcaagctttggatgaaaagagtgacctgggctgtggggcaggtggtgg ccatgacaatgcagatgtattccatctagctgggctcaccttcctcaccaacgcaaacgcagatgactc ccattatcgtgatgactcttgtaaagaaattctcaggtcaaagagaaacctgcatctcctaaggcagaa aatagaagaacaagctgctaagtacaaacatagtgtgccaaagaaatgctgctatgacggagcccgagt gaacttctacgaaacctgtgaggagcgagtggcccgggttaccataggccctctctgcatcagggcctt gatccacattaagaccctgttaccagtgatgaaggcagatatccgaagctactttccagagagctggct atgggaaattcatcgcgttcccaaaagaaaacagctgcaggtcacgctgcctgactcactaacgacttg ggaaattcaaggcattggcatttcagacaatggtatatgtgttgctgatacactcaaggcaaaggtgtt caaagaagtcttcctggagatgaacataccatattctgttgtgcgaggagaacagatccaattgaaagg aactgtttacaactatatgacctcagggacaaagttctgtgttaaaatgtctgctgtggaggggatctg cacttcaggaagctcagctgctagccttcacacctccaggccctccagatgtgttccagaggataga $\verb|gggctcgtccagtcacttggtgaccttcaccctgcttcctctggaaattggccttcactccataaactt|\\$ ctcactagagacctcatttgggaaagacatcttagtaaagacattacgggtagtgccagaaggagtcaa. gagggaaagctatgccggcgtgattctggaccctaagggaattcgtggtattgttaacagacgaaagga attcccatacaggatcccattagatttggtccccaagaccaaagttgaaaggattttgagtgtcaaagg caagggcagtgcagaggcagagctcatgagcatagctccggtgttctatgttttccactacctggaagc aggaaaccattggaatattttctatcctgatacactgagtaaaagacagagcctggagaaaaaaataaa acaaggggtggtgagcgtcatgtcctacagaaacgctgactattcctacagcatgtggaaggggggag cgctagtacctggctgacagcttttgctctgagagtgcttggacaggtggccaagtatgtaaaacagga

Page 2 of 13

Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING

INFLAMMATORY CONDITIONS

Figur 1 – page 2

tgaaaactcaatttgtaactctttgctatggctggttgagaagtgtcagctggaaaacggctctttcaa ggaaaattcccaatatctaccaataaaattacagggtactttgcctgctgaagcccaagagaaaacttt gtatcttacagccttttctgtgattggaattagaaaggcagttgacatatgccccaccatgaaaatcca cacagcgctagataaagccgactccttcctgcttgaaaacaccctgccatccaagagcaccttcacact cctgaggaaggaagcttttgttaaaggtgatccgcccatttaccgttactggagagataccctcaaacg tccagacagctctgtgcccagcagcggcacagcaggtatggttgaaaccacagcctatgctttgctcgc cagcctgaaactgaaggatatgaattacgccaaccccatcatcaagtggctatctgaagagcagaggta tggaggeggettttattecacceaggatacgattaatgccategagggeetgacagaatatteacteet gttaaaacaaattcatttggatatggacatcaatgtcgcctacaaacacgaaggtgacttccacaagta taaggtgacagagaagcatttcctggggaggccagtggaggtatctctcaatgatgaccttgttgtcag cacaggctacagcagtggcttggccacagtatatgtaaaaactgtggttcacaaaattagtgtctctga ggaattttgcagcttttacttgaaaattgatacccaagatattgaagcatccagccacttcaggctcag tgactctggattcaagcgcataatagcatgtgccagctacaagcccagcaaggaggagtcaacatccgg $\tt gtcctcccatgcagtaatggatatatcactgccgactggaatcggagcaaacgaggaagatttacgggc$ tcttgtggaaggagtggatcaactactaactgattaccagatcaaagatggccatgtcattctgcaact $\tt gaattcgatcccctccagagatttcctctgtgtccggttccggatatttgaacttttccaagttgggtt$ tctgaatcctgctaccttcacggtgtacgagtatcacagaccagataagcagtgcaccatgatttatag catttctgacaccaggcttcagaaagtctgtgaaggagcagcttgcacatgtgtggaagctgactgtgc gcaactgcaggcagaagtagacctagccatctctgcagactccagaaaagagaaagcctgtaaaccaga $\tt gactgcatatgcttataaagtcaggatcacatcagccactgaagaaaatgtttttgtcaagtacactgc$ gactcttctggtcacttacaaaacaggggaagctgctgatgagaattcggaggtcaccttcattaaaaa gatgagctgtaccaatgccaacctggtgaaagggaagcagtatttaatcatgggcaaagaggttctgca gatcaaacacaatttcagtttcaagtatatataccctctagattcctccacctggattgaatattggcc cacagacacaacgtgtccatcctgtcaagcatttgtagagaatttgaataactttgctgaagacctctt tttaaacagctgtgaatgaaaagttctgctgcacgaagattcctcctgcggcggggggattgctcctcc gactttgtgaaatggatagccttgaggggaggcgaaaacaggtcccccaaggctatcagatgtcagtgc caatagactgaaacaagtctgtaaagttagcagtcaggggtgttgggttggggccggaagaagagaccca taaaatcttgactttgcactc (SEQ ID NO:1)

Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING

INFLAMMATORY CONDITIONS

Figure 2 – page 1

MetGlyLeuTrpGlyIleLeuCysLeuLeuIlePheLeuAspLysThrTrpGlyGlnGluGlnThrTyr ValIleSerAlaProLysIleLeuArgValGlySerSerGluAsnValValIleGlnValHisGlyTyr ThrGluAlaPheAspAlaThrLeuSerLeuLysSerTyrProAspLysLysValThrPheSerSerGly TyrValAsnLeuSerProGluAsnLysPheGlnAsnAlaAlaLeuLeuThrLeuGlnProAsnGlnVal ProArgGluGluSerProValSerHisValTyrLeuGluValValSerLysHisPheSerLysSerLys LysIleProIleThrTyrAsnAsnGlyIleLeuPheIleHisThrAspLysProValTyrThrProAsp GlnSerValLysIleArgValTyrSerLeuGlyAspAspLeuLysProAlaLysArqGluThrValLeu ThrPheIleAspProGluGlySerGluValAspIleValGluGluAsnAspTyrThrGlyIleIleSer PheProAspPheLysIleProSerAsnProLysTyrGlyValTrpThrIleLysAlaAsnTyrLysLys AspPheThrThrThrGlyThrAlaTyrPheGluIleLysGluTyrValLeuProArqPheSerValSer IleGluLeuGluArgThrPheIleGlyTyrLysAsnPheLysAsnPheGluIleThrValLysAlaArg TyrPheTyrAsnLysValValProAspAlaGluValTyrAlaPhePheGlyLeuArgGluAspIleLys AspGluGluLysGlnMetMetHisLysAlaThrGlnAlaAlaLysLeuValAspGlyValAlaGlnIle SerPheAspSerGluThrAlaValLysGluLeuSerTyrAsnSerLeuGluAspLeuAsnAsnLysTyr LeuTyrIleAlaValThrValThrGluSerSerGlyGlyPheSerGluGluAlaGluIleProGlyVal LysTyrValLeuSerProTyrThrLeuAsnLeuValAlaThrProLeuPheValLysProGlyIlePro PheSerIleLysAlaGlnValLysAspSerLeuGluGlnAlaValGlyGlyValProValThrLeuMet AlaGlnThrValAspValAsnGlnGluThrSerAspLeuGluThrLysArqSerIleThrHisAspThr AspGlyValAlaValPheValLeuAsnLeuProSerAsnValThrValLeuLysPheGluIleArgThr AspAspProGluLeuProGluGluAsnGlnAlaSerLysGluTyrGluAlaValAlaTyrSerSerLeu ${\tt SerGlnSerTyrIleTyrIleAlaTrpThrGluAsnTyrLysProMetLeuValGlyGluTyrLeuAsn}$ IleMetValThrProLysSerProTyrIleAspLysIleThrHisTyrAsnTyrLeuIleLeuSerLys GlyLysIleValGlnTyrGlyThrArgGluLysLeuPheSerSerThrTyrGlnAsnIleAsnIlePro ValThrGlnAsnMetValProSerAlaArgLeuLeuValTyrTyrIleValThrGlyGluGlnThrAla GluLeuValAlaAspAlaValTrpIleAsnIleGluGluLysCysGlyAsnGlnLeuGlnValHisLeu SerProAspGluTyrValTyrSerProGlyGlnThrValSerLeuAspMetValThrGluAlaAspSer TrpValAlaLeuSerAlaValAspArgAlaValTyrLysValGlnGlyAsnAlaLysArgAlaMetGln ArgValPheGlnAlaLeuAspGluLysSerAspLeuGlyCysGlyAlaGlyGlyGlyHisAspAsnAla AspValPheHisLeuAlaGlyLeuThrPheLeuThrAsnAlaAsnAlaAspAspSerHisTyrArqAsp AspSerCysLysGluIleLeuArgSerLysArgAsnLeuHisLeuLeuArgGlnLysIleGluGluGln AlaAlaLysTyrLysHisSerValProLysLysCysCysTyrAspGlyAlaArgValAsnPheTyrGlu ThrCysGluGluArgValAlaArgValThrIleGlyProLeuCysIleArgAlaPheAsnGluCysCys ThrIleAlaAsnLysIleArgLysGluSerProHisLysProValGlnLeuGlyArgIleHisIleLys ThrLeuLeuProValMetLysAlaAspIleArgSerTyrPheProGluSerTrpLeuTrpGluIleHis ArgValProLysArgLysGlnLeuGlnValThrLeuProAspSerLeuThrThrTrpGluIleGlnGly IleGlyIleSerAspAsnGlyIleCysValAlaAspThrLeuLysAlaLysValPheLysGluValPhe LeuGluMetAsnIleProTyrSerValValArgGlyGluGlnIleGlnLeuLysGlyThrValTyrAsn TyrMetThrSerGlyThrLysPheCysValLysMetSerAlaValGluGlyIleCysThrSerGlySer SerAlaAlaSerLeuHisThrSerArgProSerArgCysValPheGlnArgIleGluGlySerSerSer HisLeuValThrPheThrLeuLeuProLeuGluIleGlyLeuHisSerIleAsnPheSerLeuGluThr SerPheGlyLysAspIleLeuValLysThrLeuArgValValProGluGlyValLysArgGluSerTyr AlaGlyValIleLeuAspProLysGlyIleArgGlyIleValAsnArgArgLysGluPheProTyrArg IleProLeuAspLeuValProLysThrLysValGluArgIleLeuSerValLysGlyLeuLeuValGly GluPheLeuSerThrValLeuSerLysGluGlyIleAsnIleLeuThrHisLeuProLysGlySerAla GluAlaGluLeuMetSerIleAlaProValPheTyrValPheHisTyrLeuGluAlaGlyAsnHisTrp AsnIlePheTyrProAspThrLeuSerLysArgGlnSerLeuGluLysLysIleLysGlnGlyValVal SerValMetSerTyrArgAsnAlaAspTyrSerTyrSerMetTrpLysGlyAlaSerAlaSerThrTrp CysAsnSerLeuLeuTrpLeuValGluLysCysGlnLeuGluAsnGlySerPheLysGluAsnSerGln

Page 3 of 13

Page 4 of 13

Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING

INFLAMMATORY CONDITIONS

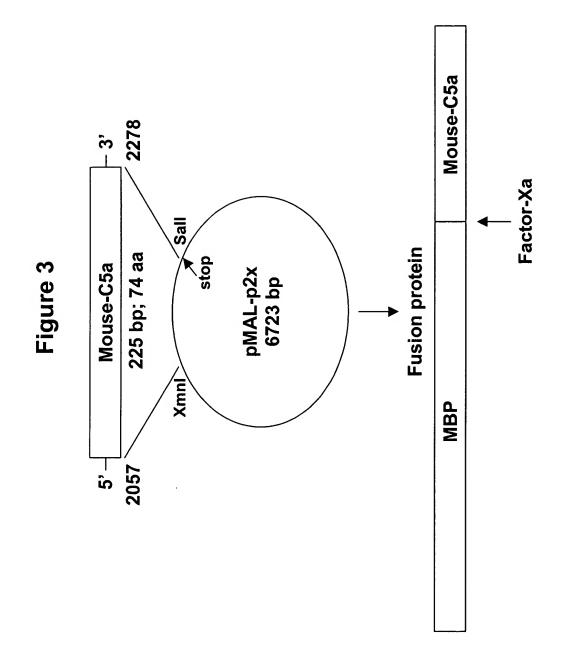
Figure 2 - page 2

TyrLeuProIleLysLeuGlnGlyThrLeuProAlaGluAlaGlnGluLysThrLeuTyrLeuThrAla ${\tt PheSerValIleGlyIleArgLysAlaValAspIleCysProThrMetLysIleHisThrAlaLeuAspIleCysProThrMetLysIleHisThrAlaCeuAspIleCysProThrMetLysIleHisThrAlaCeuAspIleCysProThrMetLysIleHisThrAlaCeuAspIleCysProThrMetLysIleHisThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleCysProThrAlaCeuAspIleC$ LysAlaAspSerPheLeuLeuGluAsnThrLeuProSerLysSerThrPheThrLeuAlaIleValAla TyrAlaLeuSerLeuGlyAspArgThrHisProArgPheArgLeuIleValSerAlaLeuArgLysGlu AlaPheValLysGlyAspProProIleTyrArqTyrTrpArqAspThrLeuLysArqProAspSerSer ValProSerSerGlyThrAlaGlyMetValGluThrThrAlaTyrAlaLeuLeuAlaSerLeuLysLeu LysAspMetAsnTyrAlaAsnProIleIleLysTrpLeuSerGluGluGlnArgTyrGlyGlyGlyPhe TyrSerThrGlnAspThrIleAsnAlaIleGluGlyLeuThrGluTyrSerLeuLeuLeuLysGlnIle HisLeuAspMetAspIleAsnValAlaTyrLysHisGluGlyAspPheHisLysTyrLysValThrGlu LysHisPheLeuGlyArgProValGluValSerLeuAsnAspAspLeuValValSerThrGlyTyrSer SerGlyLeuAlaThrValTyrValLysThrValValHisLysIleSerValSerGluGluPheCysSer PheTyrLeuLysIleAspThrGlnAspIleGluAlaSerSerHisPheArgLeuSerAspSerGlyPhe LysArqIleIleAlaCysAlaSerTyrLysProSerLysGluGluSerThrSerGlySerSerHisAla ValMetAspIleSerLeuProThrGlyIleGlyAlaAsnGluGluAspLeuArqAlaLeuValGluGly ValAspGlnLeuLeuThrAspTyrGlnIleLysAspGlyHisValIleLeuGlnLeuAsnSerIlePro SerArqAspPheLeuCysValArqPheArqIlePheGluLeuPheGlnValGlyPheLeuAsnProAla ThrPheThrValTyrGluTyrHisArgProAspLysGlnCysThrMetIleTyrSerIleSerAspThr ArgLeuGlnLysValCysGluGlyAlaAlaCysThrCysValGluAlaAspCysAlaGlnLeuGlnAla GluValAspLeuAlaIleSerAlaAspSerArgLysGluLysAlaCysLysProGluThrAlaTyrAla TyrLysValArqIleThrSerAlaThrGluGluAsnValPheValLysTyrThrAlaThrLeuLeuVal ThrTyrLysThrGlyGluAlaAlaAspGluAsnSerGluValThrPheIleLysLysMetSerCysThr AsnAlaAsnLeuValLysGlyLysGlnTyrLeuIleMetGlyLysGluValLeuGlnIleLysHisAsn PheSerPheLysTyrIleTyrProLeuAspSerSerThrTrpIleGluTyrTrpProThrAspThrThr CysProSerCysGlnAlaPheValGluAsnLeuAsnAsnPheAlaGluAspLeuPheLeuAsnSerCys Glu (SEQ ID NO:2)

Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING INFLAMMATORY CONDITIONS



Matter No.: 10223-007001 Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING

INFLAMMATORY CONDITIONS

Figure 4

Page 6 of 13

gaattccaccatcaccatctcgagccgcgggccgatatgaaaatcgaagaaggtaaactggta atctggattaacggcgataaaggctataacggtctcgctgaagtcggtaagaaattcgagaaagatacc ggaattaaagtcaccgttgagcatccggataaactggaagagaaattcccacaggttgcggcaactggc gatggccctgacattatcttctgggcacacgaccgctttggtggctacgctcaatctggcctgttggct gaaatcaccccggacaaagcgttccaggacaagctgtatccgtttacctgggatgccgtacgttacaac ggcaagetgattgettaccegategetgttgaagegttategetgatttataacaaagatetgetgeeg aacccgccaaaaacctgggaagagtcccggcgctggataaagaactgaaagcgaaaggtaagagcgcg ctgatgttcaacctgcaagaaccgtacttcacctggccgctgattgctgctgacgggggttatgcgttc aagtatgaaaacggcaagtacgacattaaagacgtgggcgtggataacgctggcgcgaaagcgggtctg accttcctggttgacctgattaaaaacaacacatgaatgcagacaccgattactccatcgcagaagct $\verb|gcctttaataaaggcgaaacagcgatgaccatcaacggcccgtgggcatggtccaacatcgacaccagc|$ ctgagcgcaggtattaacgccgccagtccgaacaaagagctggcaaaagagttcctcgaaaactatctg ctgactgatgaaggtctggaagcggttaataaagacaaaccgctgggtgccgtagcgctgaagtcttac gaggaagagttggcgaaagatccacgtattgccgccactatggaaaacgcccagaaaggtgaaatcatg ccgaacatcccgcagatgtccgctttctggtatgccgtgcgtactgcggtgatcaacgccgccagcggt cgtcagactgtcgatgaagccctgaaagacgcgcagactaattcgagctcgaacaacaacaacaataac aataacaacaacctcgggatcgagggaaggctgctaaggcagaaaatagaagaacaagctgctaagtac aaacatagtgtgccaaagaaatgctgctatgacggagcccgagtgaacttctacgaaacctgtgaggag cgagtggcccgggttaccataggccctctctgcatcagggccttcaacgagtgctgtactattgcgaac aagatccgaaaagaaagcccccataaacctgtccaactgggaaggtaagtcgag (SEQ ID NO:3)

Page 7 of 13

Matter No.: 10223-007001 Applicant(s): Rikard Holmdahl et al.

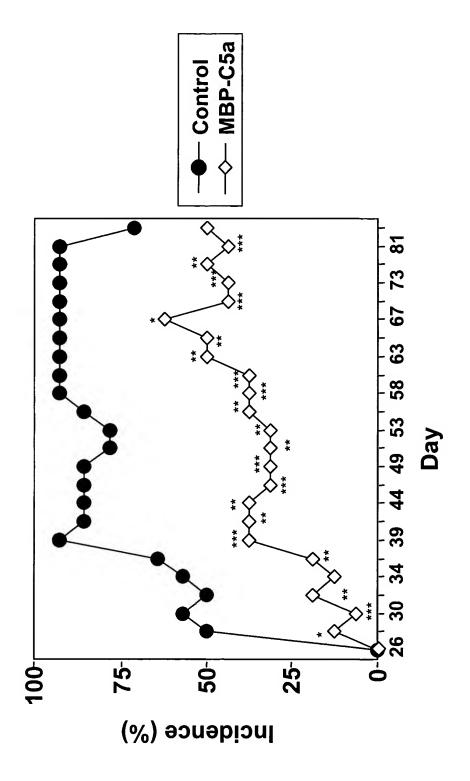
METHOD'S AND MATERIALS FOR TREATING

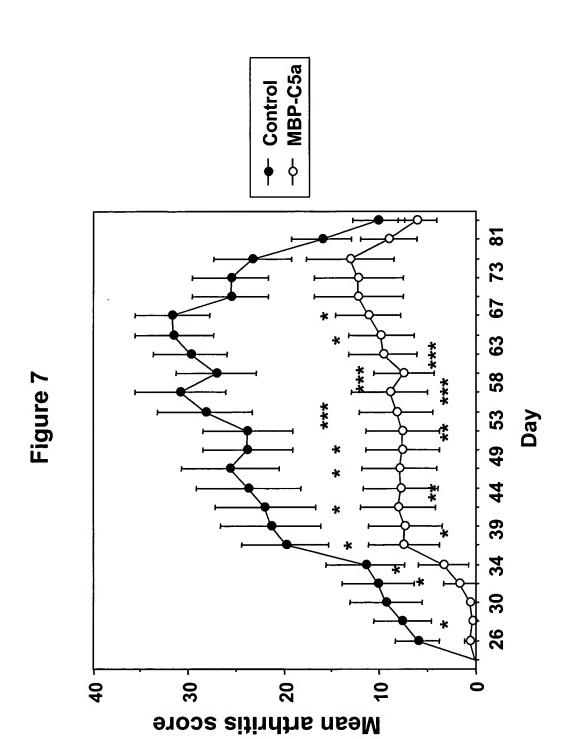
INFLAMMATORY CONDITIONS

Figure 5

GluPheHisHisHisHisHisHisLeuGluProArgAlaAspMetLysIleGluGluGlyLysLeuVal IleTrpIleAsnGlyAspLysGlyTyrAsnGlyLeuAlaGluValGlyLysLysPheGluLysAspThr GlyIleLysValThrValGluHisProAspLysLeuGluGluLysPheProGlnValAlaAlaThrGly AspGlyProAspIleIlePheTrpAlaHisAspArqPheGlyGlyTyrAlaGlnSerGlyLeuLeuAla GluIleThrProAspLysAlaPheGlnAspLysLeuTyrProPheThrTrpAspAlaValArgTyrAsn GlyLysLeuIleAlaTyrProIleAlaValGluAlaLeuSerLeuIleTyrAsnLysAspLeuLeuPro AsnProProLysThrTrpGluGluIleProAlaLeuAspLysGluLeuLysAlaLysGlyLysSerAla LeuMetPheAsnLeuGlnGluProTyrPheThrTrpProLeuIleAlaAlaAspGlyGlyTyrAlaPhe LysTyrGluAsnGlyLysTyrAspIleLysAspValGlyValAspAsnAlaGlyAlaLysAlaGlyLeu ThrPheLeuValAspLeuIleLysAsnLysHisMetAsnAlaAspThrAspTyrSerIleAlaGluAla AlaPheAsnLysGlyGluThrAlaMetThrIleAsnGlyProTrpAlaTrpSerAsnIleAspThrSer LysValAsnTyrGlyValThrValLeuProThrPheLysGlyGlnProSerLysProPheValGlyVal LeuSerAlaGlyIleAsnAlaAlaSerProAsnLysGluLeuAlaLysGluPheLeuGluAsnTyrLeu LeuThrAspGluGlyLeuGluAlaValAsnLysAspLysProLeuGlyAlaValAlaLeuLysSerTyr GluGluGluLeuAlaLysAspProArqIleAlaAlaThrMetGluAsnAlaGlnLysGlyGluIleMet ProAsnIleProGlnMetSerAlaPheTrpTyrAlaValArgThrAlaValIleAsnAlaAlaSerGly ArgGlnThrValAspGluAlaLeuLysAspAlaGlnThrAsnSerSerSerAsnAsnAsnAsnAsnAsn AsnAsnAsnAsnLeuGlyIleGluGlyArqLeuLeuArqGlnLysIleGluGluGlnAlaAlaLysTyr LysHisSerValProLysLysCysCysTyrAspGlyAlaArqValAsnPheTyrGluThrCysGluGlu ArgValAlaArgValThrIleGlyProLeuCysIleArgAlaPheAsnGluCysCysThrIleAlaAsn LysIleArgLysGluSerProHisLysProValGlnLeuGlyArg (SEQ ID NO:4)

INFLAMMATORY CONDITIONS



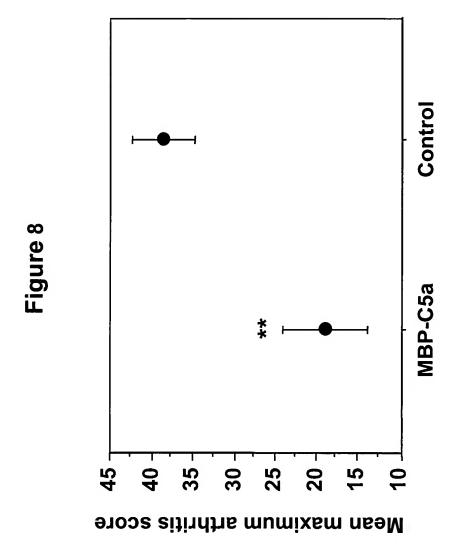


Matter No.: 10223-007001 Applicant(s): Rikard Holmdahl et al. METHODS AND MATERIALS FOR TREATING INFLAMMATORY CONDITIONS Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

METHODS AND MATERIALS FOR TREATING

INFLAMMATORY CONDITIONS



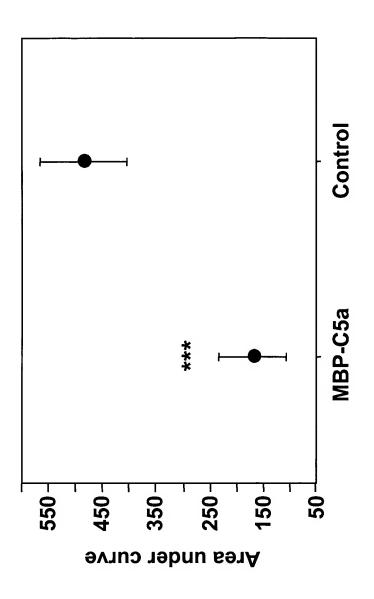
Matter No.: 10223-007001

Applicant(s): Rikard Holmdahl et al.

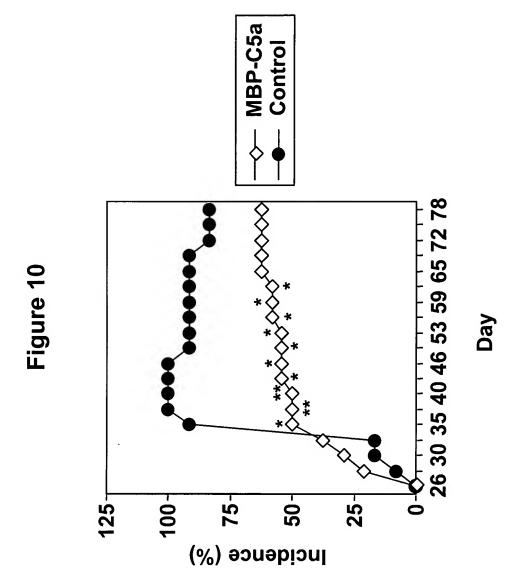
METHODS AND MATERIALS FOR TREATING

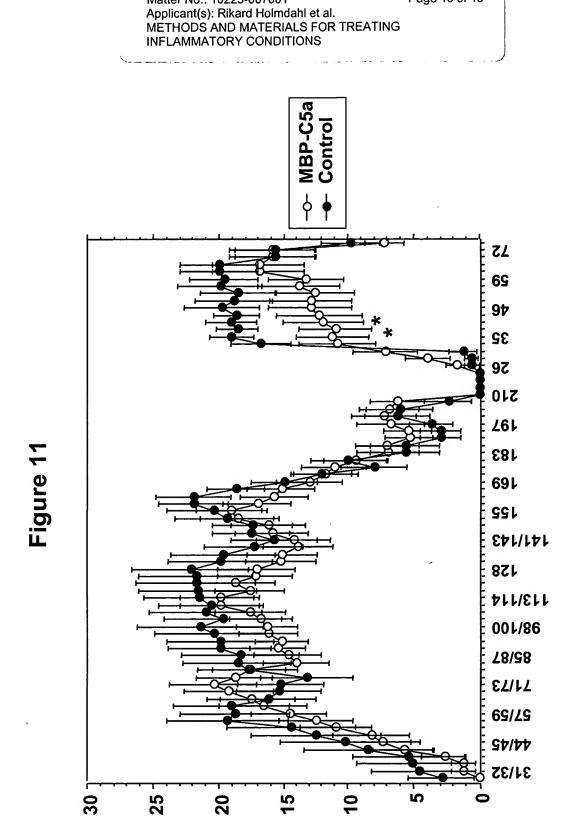
INFLAMMATORY CONDITIONS





Page 12 of 13





Mean arthritis Scor

Matter No.: 10223-007001